

6/25/04

DT04 Rec'd PCT/PTO 25 JUN 2004

MODIFIED PTO/SB/08 (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

| | | | | | |
|---|---|----|----------------------|------------------------|-------------|
| Substitute for form 1449B/PTO | | | Complete if Known | | |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT Date Submitted: June 25, 2004 <i>(use as many sheets as necessary)</i> | | | Application Number | Unassigned 10/500112 | |
| | | | Filing Date | 06/25/2004 | |
| | | | First Named Inventor | Yasuo UEMURA | |
| | | | Group Art Unit | Unassigned 1631 | |
| | | | Examiner Name | Unassigned Smith | |
| Sheet | 1 | of | 1 | Attorney Docket Number | 028567-0133 |

| U.S. PATENT DOCUMENTS | | | | | | |
|-----------------------|-----------------------|----------------------|-----------------------------------|---|--|---|
| Examiner Initials* | Cite No. ¹ | U.S. Patent Document | | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| | | Number | Kind Code ² (if known) | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| FOREIGN PATENT DOCUMENTS | | | | | | | |
|--------------------------|-----------------------|-------------------------|---------------------|-----------------------------------|--|--|---|
| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | | | Name of Patentee or Applicant of Cited Documents | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| | | Office ³ | Number ⁴ | Kind Code ⁵ (if known) | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| NON PATENT LITERATURE DOCUMENTS | | | | |
|---------------------------------|-----------------------|--|--|--|
| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published. | | |
| /CS/ | A1 | T. Yoshizawa et al., "Developing RNA Secondary Structure Prediction Support System", Japanese Society for Artificial Intelligence, March 28, 1998, pages 29-35, with English Translation, pages 1-11. | | |
| /CS/ | A2 | Y. Uemura et al., "Grammatically Modeling and Predicting RNA Secondary Structures", Proceedings Genome Informatics Workshop, Series No. 6, Dec. 11, 1995, pages 67-76. | | |
| /CS/ | A3 | Y. Uemura et al., "Tree Adjoining Grammars for RNA Structure Prediction", Theoretical Computer Science 210, (1999), pages 277-303. | | |
| /CS/ | A4 | E. Rivas et al., "The Language of RNA: a formal grammar that includes pseudoknots", Bioinformatics, Vol. 16, No. 4, 2000, pages 334-340. | | |
| /CS/ | A5 | M. Zucker, "Prediction of RNA Secondary Structure by Energy Minimization", Institute for Biomedical Computing, July 8, 1996, pages 1-32. | | |
| | | | | |

| | | | |
|--------------------|-----------------|-----------------|------------|
| Examiner Signature | /Carolyn Smith/ | Date Considered | 07/10/2007 |
|--------------------|-----------------|-----------------|------------|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

10/20/04

MODIFIED PTO/SB/08 (08-00)

Approved for [redacted] through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

| | | | | | |
|--|---|----|---|--------------------------|------------------|
| Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT Date Submitted: October 20, 2004 (use as many sheets as necessary) | | | | Complete if Known | |
| | | | | Application Number | 10/500,112 |
| | | | | Filing Date | 06/25/2004 |
| | | | | First Named Inventor | Yasuo UEMURA |
| | | | | Group Art Unit | Unassigned 1631 |
| | | | | Examiner Name | Unassigned Smith |
| | | | | Attorney Docket Number | 028567-0133 |
| Sheet | 1 | of | 1 | | |

| U.S. PATENT DOCUMENTS | | | | | | |
|-----------------------|-----------------------|----------------------|-----------------------------------|---|--|---|
| Examiner Initials* | Cite No. ¹ | U.S. Patent Document | | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| | | Number | Kind Code ² (if known) | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| FOREIGN PATENT DOCUMENTS | | | | | | | | |
|--------------------------|-----------------------|-------------------------|---------------------|-----------------------------------|--|--|---|----------------|
| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | | | Name of Patentee or Applicant of Cited Documents | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T ⁶ |
| | | Office ³ | Number ⁴ | Kind Code ⁵ (if known) | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| NON PATENT LITERATURE DOCUMENTS | | | |
|---------------------------------|-----------------------|--|----------------|
| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ⁶ |
| /CS/ | B1 | R. Nussinov et al., "Algorithms for Loop Matchings," SIAM Journal of Applied Mathematics, Vol. 35, No. 1, July 1978, pages 68-82. | |
| /CS/ | B2 | D.H. Turner et al., "Improved Parameters for Prediction of RNA Structure," Cold Spring Harbor Symposia on Quantitative Biology, Vol. LII, 1987, pages 123-133. | |
| /CS/ | B3 | Y. Sakakibara et al., "Stochastic Context-Free Grammars for tRNA Modeling," Nucleic Acids Research, Vol. 22, No. 23, 1994, pages 5112-5120. | |
| | | | |
| | | | |

| | | | |
|--------------------|-----------------|-----------------|------------|
| Examiner Signature | /Carolyn Smith/ | Date Considered | 07/10/2007 |
|--------------------|-----------------|-----------------|------------|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

| | | | | | |
|--|--|--|--|--------------------------|--|
| Substitute for form 1449/PTO | | | | Complete if Known | |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT | | | | Application Number | |
| | | | | 10/500,112 | |
| Date Submitted: November 10, 2006 | | | | Filing Date | |
| | | | | 8/23/2004 | |
| (use as many sheets as necessary) | | | | First Named Inventor | |
| | | | | Yasuo UEMURA | |
| Sheet 1 of 1 | | | | Art Unit | |
| | | | | 1631 | |
| | | | | Examiner Name | |
| | | | | Smith, Carolyn L. | |
| | | | | Attorney Docket Number | |
| | | | | 028567-0133 | |

| U.S. PATENT DOCUMENTS | | | | | |
|-----------------------|-----------------------|--|--------------------------------|---|---|
| Examiner Initials* | Cite No. ¹ | Document Number | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| | | Number-Kind Code ² (if known) | | | |
| | | | | | |
| | | | | | |

| UNPUBLISHED U.S. PATENT APPLICATION DOCUMENTS | | | | | |
|---|-----------------------|---|---|---|---|
| Examiner Initials* | Cite No. ¹ | U.S. Patent Application Document | Filing Date of Cited Document MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| | | Serial Number-Kind Code ² (if known) | | | |
| | | | | | |
| | | | | | |

| FOREIGN PATENT DOCUMENTS | | | | | | |
|--------------------------|-----------------------|---|--------------------------------|--|---|----------------|
| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Documents | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T ⁶ |
| | | Country Code ³ Number ⁴ Kind Code ⁵ (if known) | | | | |
| | | | | | | |
| | | | | | | |

| NON PATENT LITERATURE DOCUMENTS | | | |
|---------------------------------|-----------------------|--|----------------|
| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ⁶ |
| /CSI/ | A1 | TATSUYA AKUTSU, "Dynamic programming algorithms for RNA secondary structure prediction with pseudoknots", XP-002360173, Discrete Applied Mathematics 104 (2000), pgs. 45-62 | |
| /CSI/ | A2 | TATSUYA AKUTSU, "Approximation and Exact Algorithms for RNA Secondary Structure Prediction and Recognition of Stochastic Context-free Languages", Journal of Combinatorial Optimization 3 (1999), pgs. 321-336 | |
| | | | |

| | | | |
|--------------------|-----------------|-----------------|------------|
| Examiner Signature | /Carolyn Smith/ | Date Considered | 07/10/2007 |
|--------------------|-----------------|-----------------|------------|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.